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IMPROVING FITNESS STANDARDS AND EVALUATION
METHODOLOGIES FOR COMBAT RESCUE OFFICERS AND
PARARESCUEMEN

by

Michael Slojkowski, Lt Col, USAF

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ABSTRACT

This paper looks at fitness evaluation methodologies that civilian, military, and law enforcement organizations use to assess the physical capabilities of individuals that perform physically demanding tasks in a variety of environments. It analyzes the similarities and differences between the various organizations' methodologies while considering the requirements these various organizations have in performing the physical activities being evaluated. The paper also looks at changes occurring to some of the organizations' methodologies and why those changes are occurring. The paper then assesses the current Combat Rescue Officer and Pararescue fitness evaluation methodology using insight gained from the analysis of the other methodologies and provides recommendations for changes and improvements.

BIOGRAPHY

Lieutenant Colonel Michael L. Slojkowski was commissioned in the Air Force through the United States Air Force Academy in 1988. He began his service as a combat rescue pilot flying the H-3 at Kadena AB, Okinawa, Japan, where he was credited with saving over 20 lives. He flew 58 combat sorties in DESERT SHIELD and STORM, after which he transitioned to the MH-53 PaveLOW III and was assigned to the 20th Special Operations Squadron, Hurlburt Field, FL. There he participated in DENY FLIGHT, PROVIDE PROMISE, DESERT CALM, RESTORE DEMOCRACY, and other operations. He then became the Chief of the 31st Special Operations Squadron Standardization and Evaluation office at Osan AB, Korea followed by an assignment with Naval Special Warfare Development Group. He was then assigned to SOCPAC, where he was a member of the Pacific Situation Assessment Team (PSAT) that deployed to the American Embassy Manila in response to an American hostage crisis. He was also the lead PACOM planner and action officer for the China EP-3 crisis. Following SOCPAC, Colonel Slojkowski attended the Air Command and Staff College at Maxwell Air Force Base, AL and then moved to the Pentagon as the Country Desk Officer for Denmark and The Netherlands for the Deputy Undersecretary of the Air Force for International Affairs in Washington DC. He then spent almost two years at Kirtland AFB, NM training to become a Combat Rescue Officer. Prior to attending Air War College he commanded the 58 Rescue Squadron, Nellis AFB, NV, that included a tour in OPERATION IRAQI FREEDOM where he launched and directed four recovery operations. He is married to the former Kerry Donahue of Tallahassee, Florida. They have a 10 week old son named Robert.

INTRODUCTION

General Doug Brown, Commander USSOCOM, spoke to the House Armed Services in early 2007 saying, “Although still short of operators in the field, AFSOC’s redesigned training curriculum and improved recruiting are closing the gap, facilitating the projected elimination of the shortfall by FY 2009. Assessment and selection is the critical initial process by which candidates with the necessary aptitude and attitude are identified for entry into the Special Operations community and is a common starting point for SOF warriors. A relative few possess the essential combination of maturity, unfailing character, mental agility, physical strength, and endless internal drive necessary for selection and future success.”¹

This paper will focus on the fitness aspects of how we select and assess the Combat Rescue Officer (CRO) and Pararescue (PJ) operators General Brown talks about in his above speech. Specifically, the paper will look at the ways different organizations assess the fitness of individuals required to perform physically demanding tasks in a variety of environments. It will then determine if the current process used to assess CROs and PJs can be improved based on the results of this analysis.

I will first analyze the fitness standards and evaluation methodologies used by the CRO/PJ indoctrination course at Lackland AFB, TX. These two specialties act together to provide a dedicated capability to report, locate, support, recover, and reintegrate isolated personnel in support of DoD Personnel Recovery (PR) and Combat Search and Rescue (CSAR) missions. In recovering isolated personnel, CROs and PJs are required to perform physically demanding tasks in a variety of environments.

Next, I will analyze the fitness standards and evaluation methodologies used by other civilian and military career fields that perform physically demanding tasks in a variety of

¹ (Brown 2007) pg. 7

environments. The career fields I have selected to use are: United States Navy Sea, Air and Land Forces (SEALs), United States Army Rangers, Los Angeles County Sherriff's Special Weapons and Tactics (SWAT), firefighters (Montgomery, AL and Northbrook, IL), Federal Bureau of Investigations (FBI) Hostage Rescue Team (HRT), and police (Oregon State and Washoe County, NV).

In analyzing the fitness standards and evaluation methodologies used by these different career fields, I will look at the initial entry, graduation, and if available, recurring fitness standards as well as the methodologies of the evaluation process. I will then discuss how well each career field assesses their people's ability to perform physical tasks that one finds in each career field's operating environment.

I will then determine how well CRO/PJ fitness standards and evaluation methodologies assess operational capability compared to the other career fields. I will look at the pros and cons involved in creating or changing established methodologies and conclude with a final recommendation that intends to maintain the quality while increasing the quantity of CRO/PJ as directed by the 2006 QDR.

METHODOLOGIES

I chose to look at several career fields that range from elite Special Forces to every day public servants in order to get as broad of a picture as possible of the different evaluation methodologies rather than just find out which career field requires the most push-ups or fastest run times. This paper will look at the fitness standards and evaluation methodologies of: SEALs, Rangers, SWAT, firefighters, FBI HRT, and police. I will specifically look at some of the physical aspects of what is required from each career field and compare how the fitness standards and evaluations assess for what is needed to perform those physical activities.

CRO/PJ

CROs employ as ground combatants to command and control the conduct of CSAR and PR operations. They are involved in reporting, locating, supporting, recovering, and reintegrating isolated personnel.² PJs employ as ground combatants to provide emergency and field trauma care and perform the recovery aspect of a CSAR or PR operation.³ Some of the physically demanding tasks CROs and PJs are required to perform are:

- Military Free Fall and Static Line parachuting
- Combat, Search, Rescue, Confined Space & Black water Diving
- Mountain rescue/cold weather operations
- Helicopter rappel, fast rope, and rope ladder climb
- Day/night aerial and overland tactical operations
- Driving All Terrain Vehicles, Dirt Bikes, and 15' Zodiac rubber craft⁴

In executing their primary missions, CRO/PJ perform many physical tasks: ruck marching, running, swimming, parachuting, tactical and extended movements in all environments (high altitude, ocean, mountainous, jungle, forested, urban, cold, hot, wet, arid, day, or night) that require certain minimum physical standards.

INITIAL ENTRANCE STANDARDS

CRO and PJ specialties have slightly different minimum standards used as initial screening tools that must be passed just to get in the door to start initial training. They are intentionally set much lower than what is required to graduate indoctrination (INDOC) training based on improvements that are normally realized during the training.⁵ Both career fields have different entry level Physical Ability Stamina Tests (PAST).

CRO

² (13DXA CFETP 2008) pg. 7

³ (1T2XX CFETP 2008) pg.1

⁴ (AIR FORCE TACTICS,TECHNIQUES, AND PROCEDURES 2006) various

⁵ (Thompson 2008)

Candidates are selected from active duty, reserve and guard officers, ROTC, OTS or USAFA. They go through an initial paperwork intensive Phase I process that includes taking a PAST. The CRO standards to begin phase II are:

- 8 pull-ups in one minute or less
- 60 sit-ups in two minutes or less
- 45 push-ups in two minutes or less
- 3-mile run in 24 minutes or less
- 25 meter underwater pass/fail
- 1500 meter surface swim in 34 minutes or less⁶

PJ

Candidates can be prior service enlisted or basic military training graduates. They are administered a PAST with minimums that are:

- 6 pull-ups in one minute or less
- 50 sit-ups in two minutes or less
- 42 push-ups in two minutes or less
- 1 1/2 mile run in less than 11 minutes, 30 seconds
- 500-meter swim in under 15 minutes⁷

In my interview with MSgt Ron Thompson, Commandant, CRO/PJ Indoctrination Course, he stated that in extremely rare cases, individuals have gone on to successfully complete the eight-week INDOC training program with a minimum PAST score in one or at most two categories. However, most candidates that eventually graduate the INDOC had initial scores that were far above the PAST minimums and were most often close to the final graduation fitness test

⁶ (ACC Functional Manager 2006)

⁷ (PARARESCUE - 1T2X1 2006)

standards.⁸

GRADUATION STANDARDS (CRO and PJ standards are the same)

Every week of the eight week program, an evaluation is given of the following events with repetition minimums and run/fin distances increasing until the final week. Failing any event two weeks in a row constitutes dismissal from the program:

- 50 meter underwater swim pass/fail
- 13 pull-ups in one minute or less
- 75 sit-ups in two minutes or less
- 70 push-ups in two minutes or less
- 6-mile run in 45 minutes or less
- 4000 meter surface fin 80 minutes or less⁹

SEALS

SEAL physical training and qualifications are very similar to those listed in the CRO/PJ section. The initial training course is called Basic Underwater Demolition/SEAL or BUD/S for short. There is an emphasis on the maritime aspects of combat operations. Physical conditioning, open and closed circuit combat diving, land navigation, small-unit tactics, rappelling, military land and underwater explosives, and weapons training are required of all SEALs. Additional training in Sniper, Military Free-fall Parachuting, Jump Master, Explosive Breaching, and other skills are available as advanced skills.¹⁰

INITIAL ENTRY STANDARDS

- Swim 500-yards in less than 12 minutes and 30 seconds
- 42 push-ups in 2 minutes

⁸ (Thompson 2008)

⁹ (PARARESCUE/ COMBAT RESCUE OFFICER (PJ/CRO) INDOCTRINATION COURSE 2002)

¹⁰ (Navy SEAL center - SEAL training n.d.)

- 50 sit-ups in 2 minutes
- 6 pull-ups (no time limit)
- Run 1 ½ miles wearing tennis shoes and shorts in under 11 minutes¹¹

GRADUATION STANDARDS

- 50 meter underwater swim
- Obstacle course in under 10 minutes
- 4 mile timed run in boots in under 30 minutes
- 2 mile ocean swim with fins in under 75 minutes¹²

As with CRO/PJ, BUD/S evaluations are given throughout the program's eight weeks.

Specifically in four two week phases, with each phase's minimums increasing until the final graduation test is given.¹³

RANGERS

U.S. Army Rangers at their core perform conventional or special light-infantry operations. They are designed to infiltrate and exfiltrate by land, sea and air, in order to conduct direct action operations, perform raids, and recover personnel and special equipment. Their training encompasses arctic, jungle, desert, and mountain operations, as well as amphibious instruction.¹⁴

INITIAL ENTRY STANDARDS

- 49 push-ups in under two minutes
- 59 sit-ups in under two minutes
- 5-mile run in less than 8 minutes per mile
- 12 mile foot march in under 3 hour and 15 minutes

¹¹ (Navy SEAL center - SEAL qualifications n.d.)

¹² (Basic Underwater Demolition/SEAL Training n.d.)

¹³ (Caviston 2008)

¹⁴ (75th Ranger Regiment n.d.)

- Complete a 1.63 mile terrain run followed by an obstacle course¹⁵

GRADUATION STANDARDS

There are no additional formal fitness tests beyond the initial entry evaluation. Graduation from ranger school is based on passing three arduous phases: Benning, Mountain, and Florida. Scores come from cadre assessments of leadership while patrolling during those phases.¹⁶

LOS ANGELES COUNTY SHERIFF'S SWAT EMERGENCY SERVICES

DETAIL (ESD)

SWAT candidacy requires current employment as a law enforcement officer (LEO) or other qualifying law enforcement/military experience. ESD members are then selected from these already seasoned SWAT veterans to receive Paramedic and rescue diver training. The ESD members then accompany special weapons team responses to barricade/hostage, suicide intervention, and high risk warrant situations. In addition to basic SWAT qualifications, ESD also are the lead agents for all Los Angeles County Sheriff mountain search and rescue, underwater search and rescue, and swift water and flood rescue operations.¹⁷

INITIAL ENTRY STANDARDS and GRADUATION STANDARDS are the same.

Minimum passing score is 240 of a total 600 possible points:

- Obstacle Course- ¼ mile run, jump 6' wall, tunnel crawl, window crawl, hole crawl, drag dummy 15', over 6' wall, over 8' fence, run 120 yards, climb onto 6' wall and walk on wall to end. (298 seconds = 0, 136 seconds = 100)
- Litter Load- move litter with 200 lbs of sand bags 10' into back of truck (40.15 seconds = 0, 14.65 seconds = 100)

¹⁵ (Benning Phase n.d.)

¹⁶ (McMillian 2008)

¹⁷ (Vilander 2008)

- Hill Climb- 30yd steep hill climb with 25lb pack on back (38.9 seconds = 0, 11.9 seconds = 100 points)
- Litter Carry- 100lb barbell movement of 150yds up slight grade (82.2 seconds = 0, 27.6 seconds = 100)
- Pack Test- ½ mile run up slight grade with 25lb pack (306 seconds = 0, 120 seconds = 100)
- Run- 1 mile run on hilly terrain wearing a ballistic vest (591.6 seconds = 0, 293.4 seconds = 100)
- Swim test (pass/fail)¹⁸

MONTGOMERY ALABAMA, FIREFIGHTER

In performing their primary job of fighting fires, firefighters are required to carry hoses, climb ladders, and enter burning buildings, use tools (pike poles and sledge hammers) to make their way through doors, walls, and debris. They must also find and rescue occupants and provide emergency medical attention, in a variety of settings: metropolitan areas, rural areas, and forests, airports, chemical plants and industrial sites.¹⁹

INITIAL ENTRY STANDARDS

All candidates must complete a nationally recognized eight event Candidate Physical Ability Test (CPAT) in less than 10 minutes 20 seconds. The candidate wears a 50 pound vest throughout the test to simulate the weight of self-contained breathing apparatus (SCBA) and firefighter protective clothing. The test consists of:

- Stair Climb- 12.5 lbs extra weight is added to each shoulder and the stair climber is set to a 60 steps/min pace for 3 minutes, no stopping, no touching any railings/support

¹⁸ (Los Angeles County Sheriff's Office n.d.)

¹⁹ (Fire Fighting Occupations n.d.)

- Hose Drag- 200' hose length dragged 75' to a drum, 90° turn, continues 25' feet, stop drops to knee and pulls the hose line until the 50-foot mark crosses the finish line
- Equipment Carry- Remove two saws from the tool cabinet, one at a time, picks up both and walk 75' around a drum, then back to the starting point, return saws to cabinet
- Ladder Raise & Extension- Two 24' extension ladders. Walk first ladder up from ground until stationary against the wall. Extend the fly section of other ladder until it hits the stop, then lower it back to the starting position
- Forcible Entry- Candidate uses a 10 lb sledgehammer to strike a measuring device in a target area until the buzzer activates (simulated breaking down a door)
- Search- Crawl through tunnel maze 3' high, 4' wide, 64' in length, w/two 90° turns, multiple obstacles and two locations where dimensions of the tunnel are reduced
- Rescue- Grab a 165-pound mannequin, drags 35', 180° turn around drum, and continues an additional 35' feet to the finish line
- Ceiling Breach & Pull- Place a pike on a 60-pound hinged door in the ceiling and push it up 3 times, pull down an 80-pound ceiling device 5 times. Repeat sequence 4 times²⁰

GRADUATION STANDARDS

Once candidates pass the CPAT they can then attend the Fire College. There is no additional fitness requirement asked of them until they actually are employed as a firefighter at a specific department. Each department sets their own requirements. In the case of the Montgomery City Fire Department the standard is an annual job task assessment that needs to be completed sequentially within 9 minutes and 30 seconds:

- Stair Climb- Carry 100' of 1 ½ inch hose and nozzle to the 5th story of the drill tower
- Hoisting- Pull a 50' 3 inch hose connected to a rope up to the 5th story

²⁰ (Candidate Physical Ability Test Standard for Firefighter I Training n.d.)

- Forcible Entry and Ventilation- Move a 165 lb weight with an 8 pound sledge 10'
- Hose Advance- Drag a section of a 150' water filled 1 ½ hose a distance of 100'
- Victim Rescue- Drag a 175 lb rescue dummy from behind a distance of 100'²¹

In addition to the above job task assessment, alternating every six months, the following fitness assessment also needs to be passed (NOTE: a scoring matrix was requested but not released by Chief Gordon):

- Body Composition- body fat assessment from taping
- Flexibility- sit and reach
- Muscular Strength- grip strength as measured by a hand dynamometer
- Muscular Endurance- push-ups and sit-ups
- Aerobic Capacity- 1.5 mile run and step test²²

FBI HOSTAGE RESCUE TEAM (HRT)

The FBI, like SWAT for regular police forces, has a special HRT that perform missions that involve hostage rescue, barricaded subjects, high-risk arrest and warrant raids, and dive search. They also perform law enforcement roles during disaster relief and special events. Also like SWAT, the HRT has higher fitness standards than what is required of regular FBI special agents. For the purposes of this paper, the initial standards section will apply to special agent candidates and graduation standards will apply to HRT candidates.²³

INITIAL ENTRY STANDARDS (SPECIAL AGENT)

In order to pass the Physical Fitness Test, applicants must achieve a minimum cumulative score of twelve points with at least one point in each of the four events:

- One minute sit-ups (Table 1a)

²¹ (Gordon 2008)

²² (Gordon 2008)

²³ (FBI Tactical Hostage Rescue Team (HRT) n.d.)

- 300 meter sprint (Table 1b)
- Push-up (Table 1c)
- 1 ½ mile run (Table 1d)²⁴

GRADUATION STANDARDS (HRT)

HRT candidacy fitness standards require the addition of a pull-up event (Table 2) and a minimum cumulative score of twenty points with at least one point in each of the five events.²⁵

POLICE DEPARTMENTS (Oregon and Washoe County Nevada)

The physical aspects of Law Enforcement Officers' (LEO) duties involve the pursuit and apprehension of individuals who break the law, patrolling jurisdictions and investigating suspicious activity. They may also respond to calls for help, direct traffic, investigate burglaries and give first aid to accident victims.²⁶

To become a LEO in Oregon requires the completion of a police academy program. Oregon's Department of Public Safety Standards and Training (DPSST) implements a test that is established by the Board on Public Safety Standards and Training for recruitment and training of city, county and state police. This test is called the Oregon Physical Abilities Test (ORPAT). ORPAT is an assessment designed to evaluate police officer candidates on essential physical capacities required to satisfactorily perform job duties.

INITIAL ENTRY AND GRADUATION STANDARDS (OREGON)

Students have two opportunities to successfully complete the ORPAT within a timeframe of 5 minutes and 30 seconds. They are tested upon entry to Academy training and again at graduation.²⁷

The test has three parts:

²⁴ (FBI Special Agent Physical Fitness Test Scoring Scale n.d.)

²⁵ (FBI Tactical Hostage Rescue Team (HRT) n.d.)

²⁶ (Police and Detectives n.d.)

²⁷ (Oregon Physical Abilities Test n.d.)

- An obstacle run that includes crossing a balance beam, jumping across a 5' wide obstacle, up and down a flight of stairs x 2, crawl under an obstacle, and hurdle two 18" obstacles followed by a 3' high fence (repeat for a total of 6 laps, total distance is approx ¼ mile)
- Six circuits consisting of pushing an 80 pound weight off the floor, followed by a controlled fall, getting up and followed by pulling the 80 pound weight up by rope
- Finally the candidate must carry a 165 pound dummy 25' followed by dragging the same dummy 25' more feet

INITIAL ENTRY AND GRADUATION STANDARDS (WASHOE COUNTY NEVADA)

- Hand Grip 68 Kilograms- combination of left and right hand grip (best of three tries)
- Bend, Twist and Touch- touch floor and alternate twist left then right to touch spot on wall behind candidate -11 cycles in 20 seconds
- Sit and Reach- start with back against wall and set ruler to zero- minimum 16 inches
- Push-ups- minimum 18 no time limit
- Sit-ups- minimum 27 in one minute
- Vertical Jump 16 inches (3 attempts)
- 300 Meter Sprint 77 seconds
- 1 ½ Mile Run 15 minutes, 20 seconds²⁸

ANALYSIS

It is clear from looking at these eight programs that there is no one methodology that stands out when it comes to assessing the suitability of individuals to perform physically demanding tasks in a variety of environments. One thing that does stand out is that almost all of the programs listed above have initial or entry level fitness standards that are lower than graduation standards. It is pretty clear that one would expect the fitness level of an individual

²⁸ (Washoe County Physical Ability Test n.d.)

after undergoing a training program that prepares him for a physically demanding job to be higher than when he started. However, entry level standards are also lower than graduation standards because many of the elite programs have graduation fitness standards that are in the highest percentiles of the normal population distribution.

Many of the program applicants are coming from off the street (in the case of firefighter or police officer candidates) or right out of basic training (in the case of PJ/CRO and SEAL candidates). For example, Niemen (Human Performance Lab director, Appalachian State University) and Cooper (Retired Air Force Colonel and founder of the Cooper Aerobics Center) tables show the average (50th percentile) 25-year-old male at 39 pushups²⁹ and 2-mile run in 16 minutes 30 seconds.³⁰ The CRO/PJ standards are 70 pushups and 2-miles in less than 14 minutes. Those same tables show that the minimum CRO/PJ standards for pushups and running are at the 98th and 92nd percentile of the 25 year-old male population. No Cooper table was available for runs exceeding 2 miles, but the CRO/PJ minimum pace for 5-mile runs remains at or better than 7 minutes-per-mile, making the 2-mile percentile assessment of 92nd a conservative one. One cannot expect a person of average or even above average fitness to be able to graduate from programs that have minimum graduation standards in strength and aerobic activities that are in the mid-to high 90th percentiles for 25-year-olds.

In addition to having initial entry fitness standards, FBI HRT and SWAT recruit from a force that has already been exposed to expected job conditions. For example, Los Angeles County SWAT requires prior police officer or military combat arms experience.³¹ The FBI HRT takes it to an even higher level requiring two years experience as a Special Agent, a

²⁹ (Nieman 1999)

³⁰ (Cooper 1977)

³¹ (Vilander 2008)

recommendation from their Special Agent in Charge, and demonstrated excellence in firearms and physical fitness skills.³²

A common thread that runs through all the evaluation methodologies is that there is always some type of run and strength test. Most commonly these are pushups and an aerobic run. Sit-ups, pull-ups and sprint runs are also found throughout the methodologies but not as consistently as push-ups and aerobic runs. Most evaluations have a minimum standard for each category being evaluated. All are objective tests with a scoring matrix. Especially noteworthy is the tendency to have an initial evaluation that is less comprehensive/complicated than a final evaluation. This is in large part due to the increased logistic, time, and evaluator requirements that are caused by the larger number of individuals taking initial vs. final evaluations.

A significant difference noticed between the evaluation methodologies is that the military programs tend to use the basic callisthenic repetitions and running raw numbers without any relation to job performance requirements. Police, SWAT, and firefighters tend to combine or link strength tests within an aerobic framework. For example, the entire Montgomery firefighter CPAT and most of the Los Angeles County Sheriff ESD evaluation involve strength activities coincident with an aerobic activity such as carrying a fire hose up several flights of stairs or running with a weighted pack over a ½ mile course. These events test strength and aerobic fitness together whereas the military evaluations (1.5 mile run, sit-ups, push-ups) look at strength and aerobic fitness separately.

Another difference in methodologies is that the military evaluations often bring a subjective eye into play. In some cases it is overt, as with Ranger instructor and evaluator cadre assessing leadership performance of Ranger candidates while they are demonstrating patrolling skills in the field. In other cases it is subtle, as when a CRO/PJ instructor turning up the level of

³² (FBI Tactical Hostage Rescue Team (HRT) n.d.)

"harassment" on a student while performing a physical task. The student may be physically able to pass an objective fitness evaluation but the instructor wants to see if the student also has the subjective qualities of perseverance and self-sacrifice. This subjectivity looks beyond the raw evaluation numbers and asks, "How did a candidate perform in the days and weeks leading up to the final evaluation?"

Civilian police and firefighter evaluators have to work within the constraints of public law as well as deal with unions and lawyers. This makes them less likely to have the same leeway a military instructor might have. So, in order to compensate for a less subjective evaluation process, civilian entities have come up with very objective tests. They have developed these tests so that they specifically relate to actual job performance, alleviating potential issues that might come about from an equal opportunity perspective. During my interview with Assistant Fire Chief Kelly Gordon, Chief of Training for the Montgomery City Fire Department, he repeatedly highlighted how much effort went into replicating real world firefighting tasks during evaluations.³³ Having objective tasks like Forcible Entry, Victim Rescue, and Hose Advance make the test very objective.

So objective are these tests, that some might claim that they are discriminatory. For example a small framed person might complain about having to carry the same size dummy as a large framed person. Fortunately in this case, discrimination is actually allowed, in this very narrow sense, in evaluating potential employees in the law enforcement and firefighting career fields. As Chief Gordon explained it to me, the 175 pound dummy doesn't care if you are fat, skinny, tall, short, female, male, smart, dumb, black, white or any other adjective that might be used to describe a person. All the 175 pound dummy cares about is whether or not you can drag it 100 feet in the allotted time.

³³ (Gordon 2008)

This analysis section looked at the reasons behind variations in initial and graduation standards, differences and similarities between the eight listed methodologies and looked at some of the reasons behind why civilian fitness testing tended to be more task specific than military fitness testing. The following appraisal section will begin by momentarily stepping back from a narrow focus of just looking at fitness assessment methodologies by considering the benefits of a holistic approach to fitness that is embraced by the Montgomery City Fire Department. Keeping this holistic approach in mind, it will then look at current CRO/PJ fitness evaluation methodology against the backdrop of information gained in the analysis and methodology sections and then look at the potential pros and cons of changing the way CRO/PJ fitness evaluations are accomplished.

APPRAISAL

When I asked Chief Gordon why he thought he had one of the best fitness programs for firefighters in the nation, he highlighted how most fire departments only require an annual job task assessment but Montgomery city firefighters are required to also pass an annual fitness assessment and even have a no tobacco policy. He went on to say that this two-pronged approach ensures that firefighters are capable of performing firefighting tasks, that they are in good physical condition, and that they remain so during their entire tenure. Good physical condition means that an individual is fit enough to fight fires and rescue people, but more importantly, that they are healthy enough to reduce insurance risk issues such as high blood pressure, obesity and cancer.

Chief Gordon explained to me that the number one killer of firefighters was not smoke, fire, or falling debris but heart attacks while fighting a fire. This overall fitness minded approach ensures that Montgomery Alabama not only has qualified and motivated firefighters but also costs the city less because of the ultra low insurance premiums they pay.

Wondering if Chief Gordon was overstating the quality of Montgomery's Firefighter fitness program, I interviewed Joe Klem, a company captain and paramedic for the Village of Northbrook, IL, Fire Department. Mr. Klem stated that Northbrook firefighters all are given the opportunity to take an annual job task assessment nearly identical to the one given to the Montgomery firefighters. However, they don't have to pass it and they don't have to take the test if they don't want to. The only motivation provided is a \$400 bonus if they pass. There is no annual fitness test, but health awareness and fitness training is provided to ladder team leaders of the Village of Northbrook Fire Department. Mr. Klem also mentioned that programs like Chief Gordon's are making their way into his region but unions and resistance to change from the old heads are slowing down the process. Mr. Klem's eight man company is the only one at his station that participates in a regular fitness training program.³⁴

What does this fitness minded approach give the Montgomery Fire Department that the Village of Northbrook Fire Department doesn't have? It gives them lower insurance premiums, a greater esprit de corps, a healthier force, a more fit force and arguably a more capable force. Given that these benefits are in some ways a result of the Montgomery Fire Department's must pass fitness and task evaluations, what can be taken from this to enhance the current CRO/PJ fitness evaluation methodology?

When taken out of the context of the civilian world and placed into the context of the military operations world, some of the benefits of the Montgomery Fire Department's fitness methodologies fade. As a commander of a Rescue Squadron (RQS) comprised of CROs and PJs, I didn't pay insurance premiums on my men, so insurance premium cost savings don't apply. Did I have to worry about some of my CROs and PJs being fit enough to pass the fitness test? In some cases, yes. Out of my squadron's 50 assigned operators, there were 3 or 4 that were at or

³⁴ (Klem 2008)

under the minimum requirements on one or more events in the 18 month CRO/PJ fitness evaluation (Table 3). They would remain there until the fitness test date approached and then train only as hard as they needed to pass the test. If the CRO/PJ career fields had more robust evaluation methodologies (two tests a year), these individuals would need to keep their fitness levels higher over the long term in order to repeatedly meet the standards. This would be particularly so if the CRO/PJ career fields had evaluation methodologies that were comprehensive and task related rather than purely fitness related.

To illustrate a deficiency of fitness only evaluations, there were several individuals in the 58 RQS that could max out the pull-up test (16 repetitions) but had trouble climbing up a rope ladder into a helicopter. Yet, there was an individual that could barely pass the pull-up test (6 repetitions), but easily and repeatedly accomplished the rope ladder climb. One might argue that the ability to climb a rope ladder is directly related to pull-up ability as a pull-up action can get a person up a rope ladder. However, there is a lot to gain by using a proper technique and leg muscle groups instead of just pull-up muscles. So what does this mean? Just using a pure callisthenic pull-up evaluation does not in itself provide a guaranteed ability to accomplish an operational task. We will see more support for this argument in the following section on other perspectives.

OTHER PERSPECTIVES

There is quite a bit of concern from some in the Army about their own fitness testing methodologies. Lt Col Mark Batchelor, a Headquarters Company Commander that came under fire in Iraq in 2004, wrote about his concerns in his U.S. Army Command and General Staff College (CGSC) thesis *The Applicability of the Army Physical Fitness Test in the Contemporary*

*Operating Environment.*³⁵ He mentions in his paper how, “A Soldier, not part of the actual casualty evacuation (CASEVAC) element, had attempted to move the casualty out of danger but lacked the strength, and was forced to wait until someone else arrived. This Soldier had regularly, in accordance with Army regulations, passed the Army Physical Fitness Test (APFT) in the past.”³⁶

Lt Col Batchelor stated that he still had the same concerns today about the shortcomings of Army fitness testing that he wrote about in his thesis and reinforced how those concerns were shared by other Army leaders, “Commanders on the battlefield realize the importance of combat focused PT. From numerous Center for Army Lessons Learned (CALL) articles and pieces on the Company Command website, NCOs, officers, and commanders are instituting combat focused PT programs at home station and in theater. The vast majority express a belief in this approach to combat focused PT over an APFT based approach.”³⁷

Major Frederick O'Donnell, career U.S. Army infantry officer, captures the dangers of giving too much meaning to results from the APFT in his U.S. Army Command and General Staff College thesis on physical training programs for light infantry units:

“Combat physical readiness is essential to the success of the light infantry soldier on the modern battlefield. At times, it is easy to forget that combat physical readiness means more than running fast or executing 100 push-ups or sit-ups. Too often, leaders marvel at the soldier who can run two miles in under 11 minutes and are confused when that same individual cannot successfully complete a 12-mile road march with combat equipment. This happens when leaders do not understand physical readiness training and

³⁵ (Batchelor, Operations Officer, 1st Squadron, 40th Cavalry, 4th BCT (ABN), 25th Infantry Division 2008)

³⁶ Ibid

³⁷ (Batchelor, LTC 2008)

should give cause to reflect on where efforts in a light infantry battalion should be directed. Understanding these concepts is important to all leaders.”³⁸

Captain J. H. Keller, USMC, writes in his Expeditionary Warfare School thesis that Marines are concerned that a narrow focus on just Physical Fitness Test (PFT) scores that only measure cardio, abdominal and upper body strength has diminished emphasis on combat-related skills. As a result, battlefield conditioning and the associated skill sets have become subordinate to a sports-oriented physical fitness culture. He suggests that the Marine Corps should implement a new measure of physical fitness that supports doctrine, stresses combat-related skills, and enhances battlefield conditioning.³⁹

It seems that Captain Keller and others like him in the USMC have recently been heard, as just a few months ago (Aug 08) the Commandant of the Marine Corps announced the implementation of a Combat Fitness Test (CFT) that compliments the existing PFT. From the Commandant’s 1 Aug 08 ALMAR (All Marines) message:

The CFT measures the physical fitness of marines by using tests which reflect operational demands. The CFT has been designed to complement the PFT and is characterized by anaerobic (short burst) energy demands. The CFT is a three part test with universal application developed around operational vignettes that may represent a marine's combat experience. It is comprised of the following events:

- 880 yard movement to contact (MTC). Run while wearing boots and utilities
- Ammunition lift (AL). Repetitive lift of a 30 pound ammo can for two minutes

³⁸ (O'Donnell 2001) pgs. 16-17

³⁹ (Keller 2004) pg. 2

- 300 yard maneuver under fire (MANUF). Perform a series of combat related tasks for time, while wearing boots and utilities that include a combat crawl, ammunition resupply, body drag, casualty carry, and grenade throw.⁴⁰

This two pronged fitness evaluation methodology was developed in Aug 08. The Commandant of the Marine Corps has mandated implementation of this program for all Marines by Sep 09. The Montgomery Fire Department, Los Angeles County Sheriff SWAT ESD, Oregon State and Washoe County police already use a two pronged fitness evaluation methodology, so then why not change the current CRO/PJ fitness evaluation methodology as well?

CONCLUSION AND RECOMMENDATION

Given that the preponderance of civilian agencies (police, fire, SWAT) that perform physically demanding tasks (jumping over fences, dragging fire hoses, and carrying litters) use operationally related fitness standards and evaluation methodologies and that the USMC will soon start doing so as well, I suggest that it is time for the CRO/PJ community to do the same.

Before recommending changes and improvements for CRO/PJ fitness evaluation methodologies, I want to make sure that credit is given to the many that have been involved in the creation of current and past programs. These programs have trained over three thousand PJs since 1947 and one hundred CROs since 2001. Two Medals of Honor, 12 Air Force Crosses and dozens of Silver Stars have resulted from Airmen that have accomplished great things because of this training.⁴¹

⁴⁰ (Conway 2008)

⁴¹ (Vanweezendonk 2009)

With respect due to many that have gone before me, my interest is not in fixing a process that isn't broken, but to make it better. Start by revamping the existing fitness test event scoring (Table 3) so that the numbers are more realistic. Next, develop an additional annual CRO/PJ combat skills related evaluation that incorporates relevant aspects of testing similar to that given by the USMC, SWAT, firefighters and LEO. Finally, change the evaluation period for the current fitness test to 12 months and add an annual combat skills evaluation with a 6 month offset from the fitness evaluation.

The currently flawed CRO/PJ fitness evaluation requires 100 full sit-ups in 2 minutes in order to achieve a maximum score for that event (Table 3). Not a single CRO or PJ at my last unit accomplished that feat during the last ACC administered Air Crew Standardization and Evaluation Visit. On the other hand, all but two finished the 1500m swim under the minimum time (max points) of 26 minutes (Table 3). The callisthenic repetitions numbers and run/swim times used for scoring should correspond to existing human performance norms, not points applied in a linear fashion to a range of repetitions.

After fixing the flawed CRO/PJ fitness evaluation, next develop a CRO/PJ combat skills evaluation along the lines of the following strawman:

PROPOSED CRO/PJ PHYSICAL TASK EVALUATION STRAWMAN

- Obstacle Course (from Police and SWAT)
- Equipment Carry (from SWAT and Firefighters)
- Buddy Drag (from Firefighters and Marines)
- Litter/Equipment Carry (from Firefighters and SWAT)
- Movement to survivor wearing boots, rucksack, and ABUs (from Marine and SWAT)

This operational CRO/PJ task evaluation should be administered annually along with the revamped fitness evaluation to provide a CRO/PJ specific two-pronged evaluation similar to others described in this paper.

This two pronged approach will have several benefits. First, it will increase the confidence of leadership when they deploy a CRO/PJ into combat knowing that they can execute physically demanding battlefield tasks. There will be no incidents where a CRO/PJ can't "move a casualty out of danger" even though he passed a regular fitness test. Second, it will allow leadership to better assess in garrison training effectiveness and tweak it based on deficiency trends or changing in theater rescue requirements. Finally, it will help keep overall fitness levels higher by requiring individuals to be prepared to pass evaluations that are more frequent. For these reasons, this two pronged approach should be embraced by the CRO/PJ community as it has been by so many others.

TABLES

FBI One-Minute Sit-Ups

Score	Female	Male
-2	29 and below	31 and below
0	30-34	32-37
1	35-36	38
2	37-40	39-42
3	41-42	43-44
4	43-46	45-47
5	47-48	48-49
6	49-50	50-51
7	51-52	52-53
8	53-54	54-55
9	55-56	56-57
10	57 and over	58 and over

Table 1a

FBI 300-Meter Sprint (in seconds)

Score	Female	Male
-2	67.5 and over	55.1 and over
0	67.4-65.0	55.0-52.5
1	64.9-62.5	52.4-51.1
2	62.4-60.0	51.0-49.5
3	59.9-57.5	49.4-48.0
4	57.4-56.0	47.9-46.1
5	55.9-54.0	46.0-45.0
6	53.9-53.0	44.9-44.0
7	52.9-52.0	43.9-43.0
8	51.9-51.0	42.9-42.0
9	50.9-50.0	41.9-41.0
10	49.9 and below	40.9 and below

Table 1b

FBI Push-Ups (untimed)

Score	Female	Male
-2	4 and below	19 and below
0	5-13	20-29
1	14-18	30-32
2	19-21	33-39
3	22-26	40-43
4	27-29	44-49
5	30-32	50-53
6	33-35	54-56
7	36-38	57-60
8	39-41	61-64
9	42-44	65-70

10	45 and over	71 and over
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Table 1c

FBI 1.5 Mile Run (in minutes: seconds)

Score	Female	Male
-2	15:00 and over	13:30 and over
0	14:59-14:00	13:29-12:25
1	13:59-13:35	12:24-12:15
2	13:34-13:00	12:14-11:35
3	12:59-12:30	11:34-11:10
4	12:29-11:57	11:09-10:35
5	11:56-11:35	10:34-10:15
6	11:34-11:15	10:14-9:55
7	11:14-11:06	9:54-9:35
8	11:05-10:45	9:34-9:20
9	10:44-10:35	9:19-9:00
10	10:34 and below	8:59 and below

Table 1d

FBI HRT Scoring Scale for Pull-Ups

Score	Female	Male
0	0	0-1
1	1	2-3
2	2	4-5
3	3	6-7
4	4	8-9
5	5	10-11
6	6	12-13
7	7	14-15
8	8	16-17
9	9	18-19
10	10 and over	20 and over

Table 1

PJ/CRO Physical Fitness Evaluation Chart

Calisthenics				3 Mile Run		1500 Meter Swim	
Push Ups 2 minutes	Sit Ups 2 minutes	Pull Ups 1 minute	Points	Time min:sec	Points	Time Min:sec	Points
85	100	16	100	20:00	200	26:00	200
80	95	15	90	20:30	190	27:00	190
75	90	14	80	21:00	180	28:00	180
70	85	13	75	21:30	170	29:00	170
65	80	12	70	22:00	160	30:00	160
60	75	11	65	22:30	150	31:00	150
55	70	10	60	23:00	140	32:00	140
50	65	9	55	23:30	130	33:00	130
45	60	8	50	24:00*	120	34:00*	120
40	55	7	45	25:00**	110	35:30**	110
35	50	6	40	27:00***	100	36:00***	100

* Indicates MAXIMUM allowable times for personnel less than 30 years of age.

** Indicates MAXIMUM allowable times for personnel over 30 but less than 40 years of age.

*** Indicates MAXIMUM allowable times for personnel over 40 years of age.

Exercise and run/swim times will be rounded off to the next lower point value. A composite score of all events determines the overall score. Performance scale is as follows: 565-700, Outstanding; 435-560, Excellent; and 320-430, Satisfactory.⁴²

Table 2

⁴² (AIR FORCE INSTRUCTION 16-1202 VOLUME 2 2008) pg. 15

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